

## Claims

[c1] What is claimed is:

1. A retrofitable power monitoring system comprising:

an enclosure;

at least one current transformer within said enclosure;

a meter connected to said current transformer;

a communications device connected to said meter; and

a server connected to said communications device.

[c2] 2 The retrofitable power monitoring system of claim 1 wherein said meter stores information related to electrical usage.

[c3] 3. The retrofitable power monitoring system of claim 2 wherein said communications device periodically sends said electrical usage information from said meter to said server.

[c4] 4. The retrofitable power monitoring system of claim 1 further comprising a software module coupled to said server.

[c5] 5. The retrofitable power monitoring system of claim 4 wherein said software module includes a database object, said database including electrical usage information; an analysis object coupled to said database for analyzing said electrical usage information; and, a reporting object coupled to said database object and said analysis object.

[c6] 6. The retrofitable power monitoring system of claim 5 wherein said reporting object provides a plurality of predefined or user-defined reports.

[c7] 7. The retrofitable power monitoring system of claim 6 wherein said plurality of reports includes a report from a group consisting of demand graph, demand statistics, or bill verification.

[c8] 8. The retrofitable power monitoring system of claim 7 further comprising a monitor connected to said server, said reporting object displaying said plurality of reports on said monitor.

- [c9] 9. The retrofitable power monitoring system of claim 6 further comprising a comparator object coupled to said database object, said comparator object periodically comparing said electrical usage information and a predefined electrical rate profile.
- [c10] 10. The retrofitable power monitoring system of claim 9 wherein said comparator object determines a maximum electrical cost period.
- [c11] 11. The retrofitable power monitoring system of claim 10 wherein said reporting object is coupled to said comparator object, said reporting object providing a report showing said maximum electrical cost period and said minimum electrical cost period.
- [c12] 12. The retrofitable power monitoring system of claim 11 wherein said reporting object provides an recommended electrical usage profile that reduces the cost associated with the maximum electrical cost period.
- [c13] 13. The retrofitable power monitoring system comprising:  
a plurality of electrical usage monitoring devices, each of said plurality of monitoring devices collecting information related to electric usage in a discreet location;  
a server connected to communicate with said plurality of monitoring devices;  
a database object coupled to said server, said database object storing said electrical usage information received from said plurality of monitoring devices;  
an analysis object coupled to said database for analyzing said electrical usage information; and,  
a reporting object coupled to said database object and said analysis object.
- [c14] 14. The retrofitable power monitoring system of claim 13 further comprising a comparator object coupled to said database object, said comparator object periodically comparing said electrical usage information of each of said

plurality of monitoring devices and an electrical rate profile.

- [c15] 15. The retrofitable power monitoring system of claim 14 wherein said comparator object determines a maximum electrical cost period for each of said plurality of monitoring devices.
- [c16] 16. The retrofitable power monitoring system of claim 15 wherein said comparator object determines a minimum electrical cost period for each of said plurality of monitoring devices.
- [c17] 17. The retrofitable power monitoring system of claim 16 wherein said reporting object is coupled to said comparator object, said reporting object providing a report showing said maximum electrical cost period and said minimum electrical cost period for each of said plurality of monitoring devices.
- [c18] 18. The retrofitable power monitoring system of claim 16 wherein said reporting object provides a recommended electrical usage profile that reduces the cost associated with the maximum electrical cost period for at least one of said plurality of monitoring devices.
- [c19] 19. The retrofitable power monitoring system of claim 13 wherein said reporting object provides a plurality of predefined reports.
- [c20] 20. The retrofitable power monitoring system of claim 19 wherein said plurality of reports includes a report from a group consisting of demand statistics, demand statistics, or bill verification.
- [c21] 21. The retrofitable power monitoring system of claim 19 further comprising a monitor connected to said server, said reporting object displaying said plurality of reports on said monitor.
- [c22] 22. A retrofitable system for monitoring electrical usage comprising:  
a current sensor;  
a meter coupled to said current sensor, said current sensor providing a signal to said meter indicative of said current;

a storage device associated with said meter, said meter storing electrical usage information on said storage device;  
a communications device associated to said storage device;  
a server coupled to said communications device, said communications device periodically transmitting said usage information to said server;  
and,  
a means associated with said server for reporting electrical usage.

[c23] 23. A retrofitable system for monitoring electrical usage as in Claim 22 wherein said communications device is a wireless type.

[c24] 24. A retrofitable system for monitoring electrical usage as in Claim 23 wherein said communications device transmits said usage information to said server by an infrared signal.

[c25] 25. A retrofitable system for monitoring electrical usage as in Claim 23 wherein wherein said communications device transmits said usage information to said server by a radio signal.

[c26] 26. A retrofitable system for monitoring electrical usage as in Claim 23 wherein wherein said communications device transmits said usage information to said server by a cellular signal.

[c27] 27. A retrofitable system for monitoring electrical usage as in Claim 22 wherein said communications device transmits said usage information to said server by an Ethernet network.

[c28] 28. A retrofitable system for monitoring electrical usage as in Claim 22 wherein said communications device transmits said usage information to said server via a telephone line.

[c29] 29. A retrofitable system for monitoring electrical usage as in Claim 22 wherein said reporting means is a software module, said software module including a database object, an analysis object and a reporting object.

[c30] 30. A retrofitable system for monitoring electrical usage as in Claim 29

further comprising a monitor, said monitor coupled to said server.

- [c31] 31. A method for monitoring electrical usage comprising:
- sensing an electrical current;
  - receiving a signal indicative of the electrical current;
  - calculating electrical usage information associated with said received signal;
  - storing the electrical usage information;
  - transmitting the electrical usage information to a server;
  - analyzing the electrical usage information; and,
  - reporting electrical usage parameters.
- [c32] 32.A method of monitoring electrical usage as in Claim 31 wherein said reporting includes information on electrical demand.
- [c33] 33.A method of monitoring electrical usage as in Claim 31 further comprising the step of comparing said electrical usage against a predetermined electrical rate profile.
- [c34] 34. A method of monitoring electrical usage as in Claim 33 further comprising the step of creating an electrical cost profile.
- [c35] 35.A method of monitoring electrical usage as in Claim 34 further comprising the step of analyzing the electrical cost profile.
- [c36] 36.A method of monitoring electrical usage as in Claim 35 further comprising the step of determining a recommended electrical usage profile that minimizes the electrical cost profile.